GOVERNMENT OF INDIA
EARTH SCIENCES
LOK SABHA

UNSTARRED QUESTION NO:91
ANSWERED ON:24.02.2016
Flash Floods
Thakur Shri Anurag Singh

Will the Minister of EARTH SCIENCES be pleased to state:

(a) the details of technology advancements made by the Government to tackle the issue of flash floods;

(b) the details of ongoing projects and their expected completion time;

(c) whether there is collaboration with the National Disaster Management Authority to tackle the issue, if so, the details thereof and if not, the reasons therefor; and

(d) whether there is any plan to set up research facilities or laboratories regarding the same in the State of Himachal Pradesh and if so, the details thereof?

Answer

THE MINISTER OF STATE FOR MINISTRY OF SCIENCE AND TECHNOLOGY AND
MINISTRY OF EARTH SCIENCES
(SHRI Y. S. CHOWDARY)

(a-b) At present, there is no such technology to forecast flash floods in the Country.

However, consequences of heavy rainfall events leading to land sliding and floods over different river basins of the country are dealt differently. River basin floods are dealt by the Central Water Commission (CWC). Flood Meteorological Offices (FMOs) operated by the Earth System Science Organization-India Meteorological Department (ESSO-IMD) provide meteorological support to the CWC for issuing flood warnings in respect of the 43 rivers of India covering 137 sub-basins. CWC issues flood forecasts 6 h to 30 h in advance for 176 stations using Quantitative Precipitation Forecasts (QPF) received from FMOs of ESSO-IMD and in-situ hydro-meteorological data. As on today, no warning system exists for land sliding however, land sliding prone vulnerable zones are mapped so as to alert respective local governments to put such areas under watch in association with heavy rainfall warnings as and when issued for such zones.

ESSO-IMD operates a network of Weather Radars, which is helpful in issuing current weather forecast/ Nowcasts of severe weather, heavy rainfall and Cyclone monitoring. This service activity currently covers 156 urban centres under which nowcast of severe weather (Thunderstorms; heavy rainfall from lows/depressions over the land) in 3-6h range is issued. Origin, development/movement of severe weather phenomena are regularly monitored through Doppler Weather Radars (DWRs) and with all available other observing systems (Automatic Weather Station AWSs; Automatic Rain Gauge -ARGs; Automatic Weather Observing Systems AWOS; satellite based monitoring systems).

In addition, heavy rainfall warnings with a lead time of 3-5 days and city forecast for 324 locations for next 7 days is also issued by ESSO-IMD. ESSO-IMD also provides sector-wise weather forecast for seven days and warning for three days in Western Himalayan Region (Jammu & Kashmir, Himachal Pradesh and Uttarakhand) twice a daily for strategic use of Indian Army.

(c) As a part of on-going activity, back-end research support to improve operational services are provided by ESSO-Indian Institute of Tropical Meteorology (IITM), Pune and ESSO-National Centre of Medium Range Weather Forecasting (NCMRWF) with new models and product generating tools. ESSO-IMD and Indian National Centre for Ocean Information Services (ESSO-INCOIS), Hyderabad have a standard operating procedures based protocol to issue specific bulletins to National Disaster Management Authority (NDMA). ESSO-IMD shares all its forecasts and warnings of various extreme weather events with NDMA. In addition ESSO-IMD participate in meetings of crisis management committee at cabinet secretariat level to organise the effective emergency response and relief operations at state and district levels.

(d) No Madam. Based on scientific assessment of the need for further augmentation of observing system network, expansions of services to Hill states have been formulated.